



*Patent*

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT(S): Joseph C. Marron  
APPLN. NO: 10/601,802 CONFIRMATION NO.: unknown  
FILED: 23 June 2003 ART UNIT: unknown  
TITLE: MULTI-STAGE DATA PROCESSING FOR FREQUENCY-  
SCANNING INTERFEROMETER

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

Here are copies of references that may be relevant to the examination of this application. These references are listed on attached Forms PTO-SB/08A and 08B.

Priority is claimed to Provisional Application Nos. 60/391,004 filed 24 June 2002 entitled "System For Processing Multi-Wavelength Interferometer Data".

Other commonly assigned applications relating to the same general field of technology are as follows:

- US Patent Application No. 10/446,012 entitled "Tunable Laser System Having An Adjustable External Cavity",
- US Patent Application No. 10/465,181 entitled "Common-path Frequency-scanning Interferometer",
- US Patent Application No. 10/610,235 entitled "Frequency-scanning Interferometer With Non-specular Reference Surface", and
- US Patent Application No. 10/610,236 entitled "Interferometer System of Compact Configuration".

The Examiner's attention is also directed to the Background portion of the application for a discussion of the state of the art in which the invention was made.


For any questions on this art or the application, the Examiner is invited to call applicant's representative at the number listed below.

Respectfully submitted,



Thomas B. Ryan Reg. No. 31,659  
Eugene Stephens & Associates  
56 Windsor Street  
Rochester, New York 14605  
Phone: (585) 232-7700  
Dated: AUG 29 2003

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450, on: 29 Aug. 2003

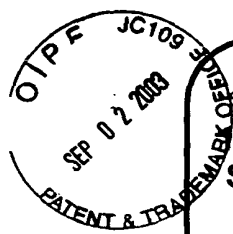
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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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**Complete if Known**

<b>Application Number</b>	10/601,802
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<b>Filing Date</b>	23 June 2003
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<b>First Named Inventor</b>	Joseph C. Marron
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Group Art Unit	unknown
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Examiner Name

Attorney Docket Number	Marron 06/03-2
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Sheet

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of

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## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

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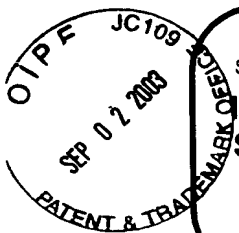
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Sheet	2	of	4	Application Number	10/601,802
				Filing Date	23 June 2003
				First Named Inventor	Joseph C. Marron
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**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**


Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	T <sup>2</sup>
	/	"Multiple-wavelength Interferometry With Tunable Source", R.G. Pilston and G.N. Steinberg, Applied Optics, Vol. 8, No. 3, March 1969, pp. 552-556	
	/	"Two-wavelength Interferometry", D. Malacara, editor, <i>Optical Shop Testing</i> , New York, Wiley, 1978, pp. 397-402	
	/	"Multiple-wavelength Phase-shifting Interferometry", Y. Cheng and J.C. Wyant, Applied Optics, Vol. 24, No. 6, 15 March 1985, pp. 804-806	
	/	"Distance measurement by the wavelength shift of laser diode light", H. Kikuta, K. Iwata, and R. Nagata, Applied Optics, Vol. 25, No. 17, 1 September 1986, pp. 2976-2980	
	/	"Interferometer for measuring displacement and distance", T. Kubota, M. Nara, and T. Yoshino, Optics Letters, Vol. 12, No. 5, May 1987, pp. 310-312	
	/	"Three-color laser-diode interferometer", P. de Groot, Applied Optics, Vol. 30, No. 25, 1 September 1991, pp. 3612-3616	
	/	"Wavelength-shift interferometry for distance measurements using the Fourier transform technique for fringe analysis", M. Suematsu and M. Takeda, Applied Optics, Vol. 30, No. 28, 1 October 1991, pp. 4046-4055	
	/	"Three-dimensional lensless imaging using laser frequency diversity", J.C. Marron and K.S. Schroeder, Applied Optics, Vol. 31, No. 2, 10 January 1992, pp. 255-262	
	/	"Holographic laser radar", J.C. Marron and K.S. Schroeder, Optics Letters, Vol. 18, No. 5, 1 March 1993, pp. 385-387	
	/	"Use of a opacity constraint in three-dimensional imaging", R.G. Paxman, J.H. Seldin, J.R. Fienup, and J.C. Marron, in proceedings of the SPIE Conference on Inverse Optics III, Orlando, Florida, April 1994	
	/	"Applications of Tunable Lasers to Laser Radar and 3D Imaging", L.G. Shirley and G.R. Hallerman, Technical Report 1025, Lincoln Laboratory, MIT, Lexington, Massachusetts, 26 February 1996	

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
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		✓ "Wavelength scanning profilometry for real-time surface shape measurement", S. Kuwamura and I. Yamaguchi, Applied Optics. Vol. 36, No. 19, 1 July 1997, pp. 4473-4482	
		✓ "Three-dimensional imaging using a tunable laser source", J.C. Marron and K.W. Gleichman, Optical Engineering 39(1) 47-51, January 2000, pp. 47-51	
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		✓ "External-cavity frequency-stabilization of visible and infrared semiconductor lasers for high resolution spectroscopy", M.G. Boshier, D. Berkeland, E.A. Hinds, and V. Sandoghar, Optics Communications 85, 15 September 1991, pp. 355-359	
		✓ "Widely Tunable External Cavity Diode Lasers", T. Day, M. Brownell, and I-Fan Wu, New Focus, Inc., 1275 Reamwood Avenue, Sunnydale, California	
		✓ "Littrow configuration tunable external cavity diode laser with fixed direction output beam", C.J. Hawthorn, K.P. Weber and R.E. Scholten, Review of Scientific Instruments, Vol. 72, No. 12, December 2001, pp. 4477-4479	
		✓ "Fizeau Interferometer", D. Malacara, editor, Optical Shop Testing, New York, Wiley, 1978, pp.19-24	
		✓ "Burch's Interferometer Employing Two Matched Scatter Plates", D. Malacara, editor, Optical Shop Testing, New York, Wiley, 1978, pp. 82-84	

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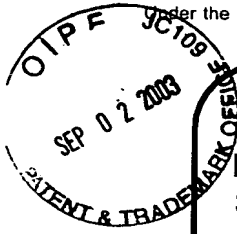
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		✓ "Holographic contouring by using tunable lasers", N. George and W. Li, Optics Letters, Vol. 19, No. 22, 15 November 1994, pp. 1879-1881	
		✓ "Use of a multimode short-external-cavity laser diode for absolute-distance intererometry", P. de Groot, Applied Optics, Vol. 32, No. 22, 1 August 1993, pp. 4193-4198	
		✓ "Three-dimensional sensing of rough surfaces by coherence radar", T. Dresel, G. Hausler, and H. Venzke, Applied Optics, Vol. 31, No. 7, 1 March 1992, pp.919-925	
		✓ Littrow-Laser web site sacher.de/littrow.htm, 07 April 2002	
		✓ "Tunable Diode Lasers – Stand up to Research and Commercial Applications", B. Shine, Laser Product Line Manager, New Focus, Inc., originally published in Photonics Spectra, January 1992, pp. 102	
		✓ "Scatter Fringes of Equal Thickness", J.M. Burch, Nature, Vol. 17, May 16, 1953, pp. 889-890.	
		✓ "Scatter-Fringe Interferometry", J.M. Burch, J. Opt. Soc. Am. 52, 1962, pp. 600.	
		✓ "Some Further Aspects of Scatter-Fringe Interferometry", A.H. Shoemaker and M.V.R.K. Murty, Applied Optics, Vol. 5, No. 4, April 1966, pp. 603-607.	
		✓ "Laser Speckle and Related Phenomena", J.C. Dainty, editor, Springer-Verlag, Berlin, 1984.	
		✓ "Digital Picture Processing", A. Rosenfeld, and A.C. Kak, Vol. 1., Academic Press. New York. 1982.	

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